



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,049	08/09/2001	Takeo Tanaami	010814	4111

7590 06/12/2006

MOONRAY KOJIMA
BOX 627
WILLIAMSTOWN, MA 01267

EXAMINER

ART UNIT PAPER NUMBER

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/927,049	TANAAMI, TAKEO	
	Examiner	Art Unit	
	William H. Beisner	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/17/05 and 5/31/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 68-72, 74-80, 82 and 83 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 68, 69, 72, 76, 77 and 80 is/are allowed.
- 6) ☒ Claim(s) 70, 71, 74, 75, 78, 79, 82 and 83 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/31/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed May 31, 2005 has been considered and made of record.

Claim Objections

2. Claims 68, 69, 71, 72, 75, 76, 77, 79, 80 and 83 are objected to because of the following informalities: These claims include the status identifier “(original)” however these are not original claims. The proper status identifier is “(previously presented)”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 74, 75, 78, 79, 82 and 83 are rejected under 35 U.S.C. 102(e) as being anticipated by Choong et al.(US 6,238,909).

With respect to claim 74, 75, 78 and 82, the reference of Choong et al. discloses a measuring device for hybridization of biopolymers. The device includes an insulating container (10) that is separate and removable from the rest of the device. The device also includes electrodes (30) that are electrically insulated from the container. The container or substrate is disclosed as being a film (See column 6, lines 10-11). The reference discloses that the electrodes can contact the substrate as long as they do not contact the buffer in contact with the substrate (See column 9, lines 37-39). The reference discloses the use of conductive polymers and indium-tin oxide, both of which are known to be transparent (See column 8, lines 14-38). The reference discloses that the device includes means for altering the direction of the electric field (See column 11, lines 54-63).

5. Claims 70 and 71 are rejected under 35 U.S.C. 102(b) as being anticipated by Heller et al.(US 5,605,662).

With respect to claim 70, the reference of Heller et al. discloses a hybridization detection device that includes a container, the container is defined by elements (59), (54) and the permeation layer (See Figures 5 and 6), that contains known biopolymer segments (See binding entities of Figures 5 and 6) fixed onto an inner wall (permeation layer) of the container which bind with unknown biopolymer segments existing in a solution contained within the container. The container is removable relative to the measuring device (electrode circuit board (52) is removable relative to the container structure) where the measuring device includes one or more electrodes (62) disposed adjacent the container for applying an electric field to the container. The electrodes (62) are electrically insulated (See column 14, lines 52-60) from the container and

Art Unit: 1744

include protrusions (62, See Figure 6) formed at spatial positions (See microlocations (55) of Figures 5 and 6) corresponding to the locations of fixed known biopolymer segments. With respect to the requirement that the electrodes mechanically contact the container, while the protrusions (62) do not mechanically contact the container, the electrode circuit board (52) that includes the electrodes does mechanically contact the container (See Figure 6 and related disclosure). As a result, the mechanical contact of claim 73 is considered to be met by the disclosure of the reference of Heller et al. Part of the container structure includes the use of a film structure (permeation layer, See column 15, lines 3-23). The disclosed system includes a structure for altering the direction of the electric field from removing unbound biopolymers (See column 16, lines 6-9).

With respect to claim 71, the reference discloses the use of a number of biopolymers, including DNA and RNA (See column 16, lines 47-67).

Allowable Subject Matter

6. Claims 68, 69, 72, 76, 77 and 80 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 68, 69, 72, 76, 77 and 80, the prior art of record fails to teach or fairly suggest the combination of the claimed externally located electrodes having protrusions with additional conductive members provided on the container at the locations of the fixed known biopolymer segments.

Response to Arguments

8. With respect to the rejection of Claims 70, 71, 74, 75, 78, 79, 82 and 83 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, Applicant's amendments to these claims has overcome the rejection, however, the claims are now rejected over the reference of Choong et al.(US 6,238,909).

9. With respect to the rejection of Claims 73 and 81 under 35 U.S.C. 102(b) as being anticipated by Heller et al.(US 5,605,662), Applicant's cancellation of these claims has rendered the rejection moot.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1744

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Beisner whose telephone number is 571-272-1269. The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:15am to 3:45pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys J. Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


William H. Beisner
Primary Examiner
Art Unit 1744

WHB